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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/637,082 | 08/11/2000 | Scott A. Williams | 0175-0284P | 8126 |

2292 7590 10/03/2002

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EXAMINER

CHANG, VICTOR S

ART UNIT PAPER NUMBER

1771

DATE MAILED: 10/03/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

09/637,082

Applicant(s)

WILLIAMS ET AL.

Examiner

Victor S Chang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-62 is/are pending in the application.
- 4a) Of the above claim(s) 46-57 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-45, 58-62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5,940
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Initialed PTO-1449 Paper No(s) 2, 4, 5 have been included in the last Office action, Paper No. 6. Per Applicant's request, a new copy of Paper No. 5, along with Paper Nos. 9 and 10, will be included in this Office action.
3. The copending child Application 09/828134 is acknowledged.
4. Rejections not maintained are withdrawn.

Election/Restrictions

5. Applicant's election with traverse of Group I, claims 1-45 and 58 in Paper No. 7 is acknowledged. The traversal is on the ground(s) that MPEP section 821.04 "Rejoinder". This is not found persuasive, substantially for the reasons set forth in sections 2 and 4, Paper No. 6, that in the instant case the label sheet can be attached to the textile by ultrasonic welding, instead of the heating process.

The requirement is still deemed proper and is therefore made FINAL.

Specification

6. The disclosure is objected to because of the following informalities: The antistatic layer (26) is not shown in Fig. 1 (Specification, page 49, lines 15-16).

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

7. The amendment filed 8/14/2002 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

It appears that the amendment to Specification is new matter: Specifically the term "alternatively" or "or alternatively" changes the scope of the Specification (Response, pg. 16; pgs 51-52 of Spec.).

Applicant is required to cancel the new matter in the reply to this Office Action.

Response to Amendment

8. Claims 1-45 and 58-62 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, substantially for the reasons set forth in section 6 of Paper No. 6, together with the following additional observations.

With respect to Applicants' Response arguing that the Examiner provides no reasoning as to why it is necessary to specify the layer order (Response, page 7, 3rd paragraph), the Examiner would like to point out that without the specified layer order, the layers could be in any random order. For example, it is noted that there are two types of heat transfer labels with basically the same elements but each embodiment

functions differently when the layers are in different orders, as demonstrated by Applicants' Response to the Kronzer reference (Response, pages 9-14). Further, it also appears that the Specification indicates the PSA layer is coated onto the base, and the Adhesion Layer is coated onto the PSA layer. Also, optional opaque layers may be coated over the Adhesion Layer (Specification, page 3, lines 4-17). As such, clearly these layers have to be placed in a specific order to function properly. Lastly, it might further be considered that some might consider the above to be a 112, 1st paragraph rejection as based on "undue breadth".

With respect to Applicants' argument that the copolymer is functionally defined, the Examiner would like to point out that the Specification indicates copolymer blends of polyester, acrylic polymer or copolymer blend can be used as PSA (Specification, page 13, 1st paragraph). Failing to specify which components constitute members of the "copolymer blend" is vague and indefinite and also might be considered to be unduly broad as well.

Further, the Examiner notes that the newly amended claim 1(ii) now appears to recite a narrower claim with the Tg limitation (less than 0°C) placed on each Markush members.

Also noted is that the newly amended claim 1(iii), line 1, recites "at least" in addition to the Markush language which results in a broader claim 1, and as such the Examiner suggests deletion. Additionally, at line 4, the "wherein" clause clearly narrows the claim, Applicants comments to the contrary in their Response notwithstanding.

9. Claims 1-45 and 58-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meyer (US 3595739) in view of Kronzer (US 5798179).

Meyer's invention is directed to heat-sealable labels for applying markings or decorative effects to textile articles, fabrics or other sheet materials, etc. (column 1, lines 26-29). Referring to the drawing, Meyers teaches that the label comprises a support consisting of a thin absorbent paper which is impregnated with a solution or dispersion of a heat-crosslinkable resin. On the under side of the support there is an additional layer of coating of the heat crosslinkable (i.e., heat-sealable, heat-activated, or heat-activatable) resin which cures rapidly when the labels are applied to the article to be treated at a temperature range of 150-250°C (column 3, lines 12-21 and lines 48-54). On the opposite side of the support, a printed pattern or design is applied by a printing process using a printing ink, which also is a heat curable resin together with suitable pigments and other additives suitable to a printing medium (column 3, lines 23-29 and lines 55-58). If desired, an overcoat is applied over the printed layer (column 3, lines 59-60). Further, Meyer teaches that the design or pattern is visible to the operator when applying the label to be marked (column 3, lines 62-64). Regarding the opaque layers of thermoplastic polymers with optional pigment, it is believed that such layers are either expressly or inherently disclosed.

For claims 1, 8, 18-19, 29, 40-45 and 59-62, Meyers lacks the specific teachings of a heat-sealable thermoplastic layer. Kronzer's patent, however, teaches that heat-sealable layers are conventional and well known in the art of heat transfer labels. For example, Kronzer teaches that the heat-sealable layer may be a melt-extruded film, and

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other polymers which may be employed include polyesters, polyamides, and polyurethanes. Waxes, plasticizers, rheology modifiers, antioxidants, anti-stats, anti-blocking agents, and other additives may be included as either desired or necessary (column 6, lines 43-59). Additionally, the Examiner takes Official notice that employing additives and emulsion polymer blends with suitable blending ratio are commonly used for polymer property modification, as such it would have been obvious to one skill in the art at the time the invention was made to include various additives and/or polymer blends in the formulation, motivated by desired thermal and physical properties. The examiner notes that the facts asserted to be common and well known are capable of instant and unquestionable demonstration as being well known. To adequately traverse such a finding, Applicant must specifically point the supposed errors in the examiner's action, which would include stating why the noticed fact is not considered to be common knowledge or well-known in the art. As such, in the absence of unexpected results, it would have been obvious to one of ordinary skill in the art of heat-sealable label or transfers to modify Meyer's label with Kronzer's thermoplastic heat-sealable layer, motivated by the desire to simplify production process.

Regarding the cold releasable lightly tacky pressure sensitive adhesives, the Examiner takes Official notice that providing a lightly tacky pressure sensitive adhesive as an element of a releasable layer is well known in the art of pressure sensitive adhesives. Note also as evidence the state of the art Gunter et al. (US 5387107), which teaches that a sheet article (photograph) may be applied via a lightly tacky adhesive so as to permit easy removal when desired (column 5, lines 10-20). Further, it is believed

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that the Tg of these lightly tacky pressure sensitive adhesives are inherently less than 0°C. As such, in the absence of unexpected results, it would have been obvious to one of ordinary skill in the art to provide a lightly tacky pressure sensitive adhesive layer on the surface of the releasable support, motivated by the desire to enhance protective function by increased adhesion, i.e., prevent premature delamination, yet it is still releasable when desired.

For claims 2-4, 10-14, 20-24, 26-27, 30-31 and 36-37, it is believed that after properly crosslinked, Meyer's image receiving layer is inherently heat stable and does not melt at or above the melting temperature of a thermoplastic heat-sealable layer. Note also that Meyer teaches that various solutions and dispersions can be used as coating media (column 3, lines 72-73), and Kronzer teaches that the image receiving layer may include particles of a thermoplastic polymer selected from the group consisting of polyolefins, polyesters, polyamides, and ethylene-vinyl acetate copolymers (column 7, lines 12-21), and may also comprise nonionic surfactants, such as the complex polymer of ethylene oxide, propylene oxide, and alcohols, etc. (column 8, lines 15-28).

For claim 5, the Examiner takes Official notice that it is common knowledge that acrylic polymer adhesives are suitable for pressure sensitive adhesive applications.

For claims 6-7, the Examiner takes Official notice that it is common knowledge to one of ordinary skill in the art of adhesive sheet that a cellulosic nonwoven web (e.g., paper), polyester film, or silicone film can be used as a support for release layer.

For claim 9, the Examiner takes Official notice that it is common knowledge that a suitable heat-sealable thermoplastic resin for heat transfer or label application would inherently have physical properties as the instant claimed invention. Note also that Kronzer teaches that the an heat-sealable layer has a exactly the same solubility parameter of at least about $19 \text{ (Mpa)}^{1/2}$, and melts in a range of from about 65°C to about 180°C (column 2, lines 37-48).

For claims 15-17, 25 and 34-35, it is believed that selecting an ethylene acrylic acid dispersion polymer and film forming binder with T_g in the range of 65°C to about 180°C to meet the typical temperature range of a heat setting operation and selecting an elastomer emulsion and/or a polyurethane dispersion, having a T_g in the range of -50°C to 25°C , to adjust the overall T_g of a polymer blend are either expressly or inherently disclosed by Meyer and/or Kronzer, or an obvious optimization to one of ordinary skill in the art.

For claim 28, Kronzer discloses that water-dispersible ethylene-acrylic acid copolymers have been found to be especially effective film-forming binders (column 6, lines 1-3).

For claims 32-33 and 58, it is believed that the amount of dry coat for the heat-sealable layer and the image receiving layer are either expressly or inherent disclosed, or an obvious optimization to one of ordinary skill in the art.

For claim 39, Kronzer teaches that the heat-sealable layer may include particles of a thermoplastic polymer having largest dimensions of less than about 50

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micrometers. Desirably, the particles will have largest dimensions of less than about 20 micrometers (column 7, lines 12-16).

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In addition, the following references are cited of interest for making heat activated label or transfer:

US 3959555 to Bay et al.

US 4610904 to Mahn, Sr. et al.

US 5480506 to Mahn, Sr. et al.

US 6241841 to Mahn, Sr. et al.

US 4104816 to Pingeton

US 5816730 to Alspaw et al.

11. Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 9/13/2002 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609(B)(2)(i). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S Chang whose telephone number is 703-605-4296. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

VSC
October 1, 2002

DANIEL ZIRKER
PRIMARY EXAMINER
GROUP 1800-
1700

